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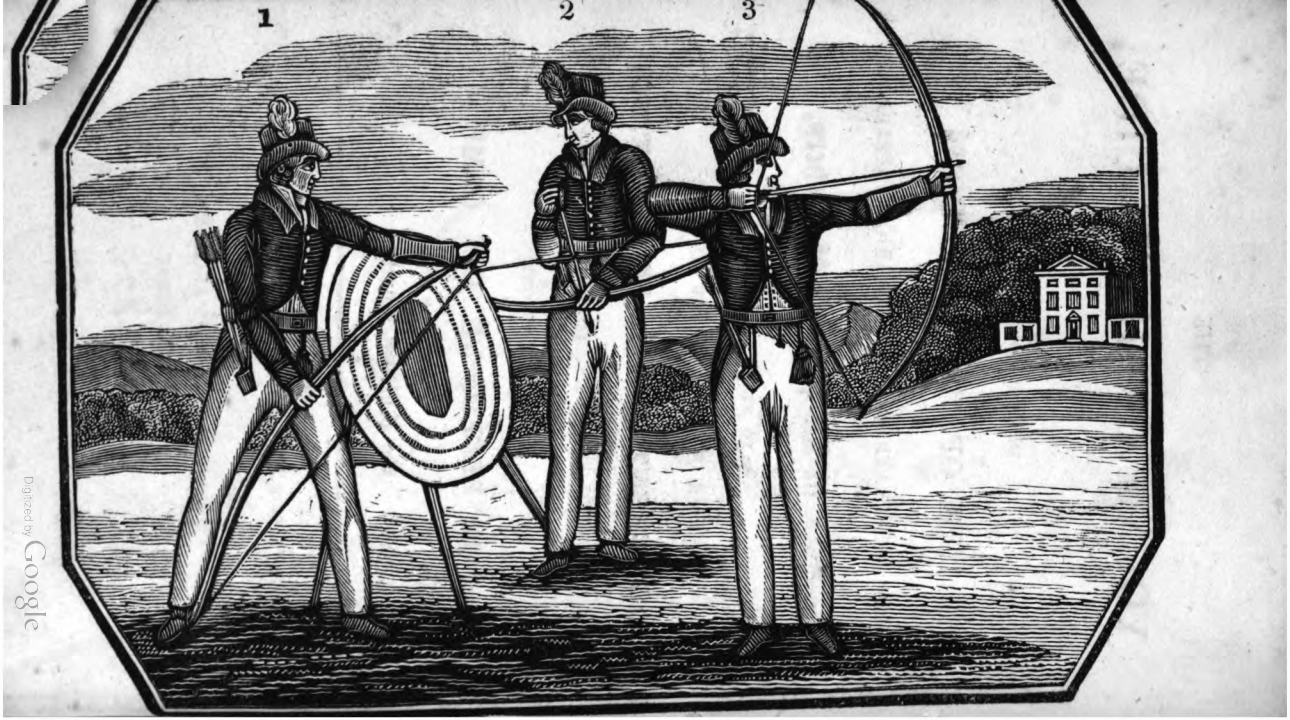

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PH. 1828.

THE

YOUNG ARCHER'S GUIDE;

OR

INSTRUCTIONS IN THE

USE OF THE LONG BOW;

WITH OBSERVATIONS ON THE VARIOUS APPARATUS

Used in the Practice of Archery,

TO WHICH ARE ADDED,

AN EXPLANATION OF THE

DIFFERENT KINDS OF SHOOTING,

WITH THE RULES TO BE OBSERVED,

AND DIRECTIONS

FOR RECKONING THE GAME.

By William Sparkes.

DERBY.
PRINTED FOR THE AUTHOR, BY WILKINS AND SON.

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KING STREET, DERBY.

1828. 82.

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INTRODUCTION.

THE object intended in the publication of the following Tract, is, to give plain, easy, and concise directions for the use of the LONG Bow, and the several instruments necessary in the practice of ARCHERY.

As there are, doubtless, many young persons desirous of practising this delightful exercise, but who are deterred from the undertaking, in consequence of the want of proper instructions; the information conveyed in the subsequent pages, is designed expressly for their use: and the greatest pains have been taken to exhibit

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the necessary instructions in the most simple, explicit, and yet circumstantial manner; so that the merest tyro in the Art, by a *careful attention to every particular*, as he proceeds, cannot fail of success in the accomplishment of his object.

The experienced Archer, into whose hands it may sometimes fall, and whose mode of shooting may vary in some degree from that which is herein described, is requested to extend his indulgence to this attempt to inform the inexperienced: since he must be aware that there considerable varieties of method observable in the practice of the most skilful. In fact, there are scarcely any two Bowmen who perform all the operations, from the *stringing of the Bow*, to the *loosing of the Arrow*, in an exactly similar way.

But the small differences here alluded to are of little consequence, provided that the thing be done gracefully: for, as the celebrated

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Roger Ascham justly observes,* "*the best shooting is always the most graceful shooting.*

Those who want further information than what is contained in this initiatory tract, are referred to the "ENGLISH BOWMAN," by Mr. T. Roberts; a work to which the Author has made frequent reference, and to which he feels pleasure in acknowledging his obligations. Mr. Roberts was a member of the *Toxophilite Society*, and was unquestionably conversant with the history of Archery, and with all the particulars of its modern practice. He makes frequent and long quotations from Ascham, who lived in the reign of Henry the Eighth, when Archery was a favourite sport of the Sovereign, and one of the most fashionable Amusements of the day; and so continued through the intermediate reigns, down to that of William the Third. The latter Prince, being little acquainted with

* Quoted by Roberts in his English Bowman, p. 178.

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the pastimes of the English, and little disposed to cultivate an acquaintance with them, neglected to honour the practice of the Bow with that species of encouragement which it had received from his predecessors. Thence we may trace its gradual decay, for nearly a century subsequent to the Revolution: towards the end of which period very few societies of Archers remained in the Kingdom; and the Long Bow had almost fallen into disuse.

But here commenced a new era in the annals of Archery. Under the auspices and encouragement of Royalty, the Art was again revived, and has received additional and unaccustomed honours from the patronage bestowed upon it by the softer sex. The exercise of *female skill* in the practice of this elegant, graceful, and health-promoting recreation, is now becoming common in the higher grades of Society; and affords, undoubtedly, an admirable relief from the sedentariness of the customary feminine

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occupations. Now, loosened from the hand of fair daughter of Albion,

> Swift from the twanging string the Arrow flies,
> Pierces the golden mark, and gains the prize.

An interesting and charming spectacle! For what attitude is calculated to display the human figure to greater advantage, or to exhibit it in a more graceful and admirable point of view, than that of drawing the Bow?

But it would be foreign from the purport of the present work to expatiate on the history or on the excellence of Archery, which has the testimony of ages in its favour. Suffice it therefore to say, that the following instructions for the management of the Bow, and the practice of shooting, are adapted to Ladies as well as Gentlemen.

Derby, August 18*th*, 1828.

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INSTRUCTIONS

IN THE

USE OF THE LONG BOW,

AND THE

VARIOUS APPARATUS USED IN ARCHERY.

How to bend and String the Bow.

The first business of a young Archer, is to learn how to *bend his bow properly*; as by attempting, through ignorance or inadvertence, to *bend* them the *wrong way*, beginners frequently *break* their Bows.

By a careful attention to the following particulars, you may soon learn to *bend* and *string* the Bow without danger.

Take the Bow by the *handle* (not above the handle) in the *right hand*.

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Place the bottom end (or that which has the shortest horn, and the string in the *nock**) upon the ground, so as to rest against the hollow of the inside of your right foot; the *flat side* of the Bow, which is called the *back*, and which must be bent *outwardly*, or in the *opposite* direction to the *string*, being placed towards you.

The left foot, at the same time, must be advanced a step forward, and the right so turned as to prevent the Bow from slipping out of its rest.

Place the middle of the thick part of the left hand upon the upper limb of the Bow, below the eye of the string; and pull up the middle with your right hand, the wrist resting firmly against your side: at the same time, press the top down, sliding the hand upwards, and with the thumb and middle of the second joint of the forefinger, carry the eye of the string into the upper nock.

Be careful to keep the last three fingers of the left hand, which are not used in stringing, stretched out, so that they come not between the string and the round part of the Bow: for should you chance to let the Bow slip, with your fingers between, before the string is safely lodged in the nock, they will be severely pinched; nor will you be enabled to extricate them without considerable difficulty; probably not without assistance.

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* This is the old way of spelling *notch*, which, in archery, is always spelt and sounded *nock*.

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Keep the hand open therefore, as in the annexed Figure;

in other respects Figure 1, in the Frontispiece, displays the proper attitude for stringing the Bow.

Remember invariably to observe the caution previously given, to bend the *flat side* of the Bow *outwards*; the round side (called the *belly*) being kept towards the string.

Most modern Bows, the backed* ones in particular, are made so as to spring back a little when unstrung, in

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* *Backed Bows* are so called in contradistinction to *Self Bows*. The latter are made of one single piece of wood: but the well known difficulty of procuring supplies of suitable wood for the purpose, has given rise to the construction of *Backed Bows*; which are much more general than the other kind, as well as superior to them. The belly is formed of some elastic wood, and the back of tough, straight-grained wood. The judicious combination of the two qualities, forms undoubtedly, the best material for a Bow: but if it is bent to any considerable degree the *wrong way*, it must inevitably break.

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order to give them a better cast. The young beginner, therefore, might very naturally suppose, that the Bow thus bent, must be bent still further in the *same direction* to be strung: but to attempt that, would, in all probability, break it instantly.

These observations being thoroughly understood, and the strength of the Bow being suitable to your powers, you will soon, with a little practice, be enabled to string it. But do not condemn the Bow as being too strong, if you cannot accomplish the stringing on the first or second trial; nor attempt it in any mode deviating from the rules here given, which accord with the method of skilful practitioners, and are the result of long experience; but rest awhile, and then try again, and you will probably succeed: for the facility of managing this operation depends more on a *knack* to be acquired, than on the extent of the muscular powers.

To unstring the Bow.

Hold the bow in the same position and manner as in stringing; press down the upper limb till the string is sufficiently slackened; then with the fore-finger lift the eye of the string out of the nock.

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Be careful to slacken the string sufficiently before you attempt to disengage it, or you will chafe it between the finger nail and the edge of the nock.

I shall now proceed to make a series of observations on the Apparatus necessary for the practice of Archery, on the proper use of each Instrument, and other matters which ought to be known before a person commences shooting.

Observations on the Bow.

The *strength* of a Bow is ascertained by the number of pounds required to draw it the length of an Arrow. The number is marked just above the handle: thus, a Bow marked 40, requires a weight of forty pounds to draw an Arrow up the head.

Ladies' Bows vary from 24lb. to 34lb.; Gentlemen's, from 34lb. to 70lb.; very rarely beyond that strength: from 42lb. to 55lb. are the most usual limits.

Self Bows, and *Backed Bows,* have been already described.* The ancient Bows were, without doubt, wholly of the former description: and some few are now in use. *Backed Bows* are of modern invention. They are made

* In the note, Page 11.

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of two, three, or four pieces of wood; and are preferable in most respects to the other kind. They have a neater appearance, shoot more pleasantly, and cast an arrow further; and the grain of the wood being oftener crossed, they will stand better. But they require some care to preserve them in good order; and the Young Archer is requested, therefore, to observe the following directions.

When the Bow is strung, hold it in a perpendicular direction with the string towards you, in order to see if the string appears to cut the bow straight down the centre: if not, shift the eye and noose of the string towards the side which appears the larger, till it will do so. For the string will sometimes get wrong in this respect, and has a tendency not only to throw the Arrow wide from the mark, but also to warp the Bow, if not altered in time.

I would advise the unstringing of the Bow at every end, when shooting with a large party: for a bow being long strung, loses its elasticity. Some Archers do not think this necessary. They will not unbend their Bows at all while the shooting continues; but keep them strung for several hours: which is not a judicious practice.* If

* Roberts, in treating on this subject, quotes the following anecdote, as related by Ascham. "I had, says, he, two bows, the one quick of cast, neat and elegant, fit for pleasure and profit: the other a *lug*, slow of cast and following the string; more sure to last than pleasant to use. By accident, they were both left bent all night, and part of the next day. In the morning, I found my good bow entirely cast on one side, and as weak as water: but, as to the lug, it was not at all the worse, but afterwards shot as well and as far as ever it did.

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you let your Bow remain strung one hour, the evil is coming on, if two, it becomes much worse; and as the trouble is but little, I would strongly recommend that the Bow be unbent frequently, if not at every end.

If you shoot in foggy or damp weather, be careful frequently to rub your Bow dry; that the humidity of the atmosphere may not be suffered to penetrate and to spoil the glue.

Always cut off the waste string from the bottom end, after the noose is tied; otherwise it will become toused, and the loosened fibres will be often rendered damp by the grass. If put into the bag in that state, the bag consequently becomes damp, and the bow, in all probability, sustains some injury.

After the conclusion of a day's shooting, let your Bow, before it is laid by, be well rubbed with a woollen cloth anointed with bees-wax: not so as to leave the surface covered, as it were, with small lumps of the wax, which will give it a filthy appearance; but so as to produce a fine, smooth, even gloss. By attending uniformly to this, the Bow will not only be improved in appearance, but it will be rendered more capable of resisting the humidity of the atmosphere.

The Bow should be kept in a baize bag, and locked up in a tin case, to preserve it from the prying curiosity of servants and strangers. When this precaution is neglected,

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Bows are frequently broken, or materially damaged; by being handled and played with by people who do not understand them.

The case should be hung upon a dry inner wall, in a well aired room, but not too near the fire; that its contents may be protected from the ill effects of damp.

When an Archer is engaged in shooting, he should never lend his Bow to another; for two will certainly work it too hard, diminish its powers, and render the shooting very uncertain. Besides, a Bow may break in his own hands in consequence of an injury previously received in the hands of another person.

If an Archer lend his bow to be shot with in his absence, he should be extremely cautious to whom; as in the hands of an unskilful person, it may be broken or so damaged as to break when the owner shall next use it: and many Archers are so partial to their Bows, as to think they could not be replaced by any new ones that would be equivalent to them.

Be careful not to shoot with Arrows that are too long for your Bow. If the Bow measures five feet ten inches between nock and nock, the Arrows should not exceed twenty-eight inches in length. For Ladies' Bows of four feet ten inches between nock and nock, the Arrows should not be more than twenty-four inches.

Observe always in shooting to keep the *stringing end* or

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longer limb of the Bow *upwards*; as to pull an Arrow against the short limb will endanger the Bow. If a young Archer be preparing to shoot with the wrong end upwards, he will easily discover his error from the nock of the Arrow not corresponding properly with the silk wrapping on the string.

There are many different ways in which a Bow may be broken. For instance, by overdrawing it;—by drawing it a little way and twanging the string, in which case it has no power to counteract its own force;—by the string being not lodged securely in the nock;—or by the breaking of the string. In the *English Bowman*, p. 182, Roberts quotes Ascham on the last mentioned subject, in the following words. "When the string begins, never so little, to wear, trust it not, but cast it away; for *it is an ill saved half-penny thot costs a man a crown.*" And again p. 222, "A smart-casting backed Bow which stands the breaking of the first string, adds, thereby, a guinea to its value.

Should you have occasion to bend your Bow in frosty weather, observe the precaution of previously rubbing it well with the hand or a warm cloth, in order to bring it to a proper temperature: otherwise it may break.

A Bow that has not been used for a long time, should be well rubbed with linseed oil, particularly on the back, before you attempt to bend it.

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On the String.

Bow strings are made of hemp or flax; but those of good hemp are the best: they stretch more at first than the flaxen ones, but in the wear they will be found more durable.

The central part of the string, from which the Arrow is discharged, is wrapped with strong sewing silk; which not only makes the nock of the Arrow fit better, but also preserves the string from wearing by the friction of the Arrow and the fingers. Whenever the silk wrapping begins to wear off, it must be immediately replaced, or the String will soon be in danger of breaking; and the consequence may be, the breaking of the Bow itself. Let the wrapping be thick enough to fill the nock of the Arrow moderately; not *very tight,* as the Arrow may thereby be broken.

It is proper that every Archer learn to fix a string to his Bow. In doing this be careful in opening it not to break the composition that is on it; cut the ties, take hold of the eye, which you will find ready worked at one end; let the other part hang down, and pass the eye over the upper horn of the Bow, if a Lady's Bow, from two to two and a half inches below the nock; if a Gentleman's, from two and a half to three inches, according to the length and the nature of the bow; then run your hand gently down the

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Bow and String to the bottom horn,* turn it round the nock there to find the proper length: fit the end of the String on this nock, with a running noose like the one used by Carpenters, which is called a *timber noose.* A representation of this kind of noose is given in the annexed figure.†

When a Gentleman's Bow is strung the proper length, the string will be from five and a half to six inches (but not exceeding six) from the inside of the central part of the Bow. The distance in a Lady's bow will vary from five to five and a half inches.

When a string has been sufficiently stretched by shooting, you may wrap a little silk of different colour just the width of the Arrow nock, on the part where the Arrow fits on it; which is called the nocking point. Some leave two small knobs of the wrapping for this purpose, so that the Arrow will just fit on between them. Either method will answer very well; but there is a necessity for some mark of this description, that you may always nock correctly.

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* Be careful in doing this, not to snarl or untwist the string.

† The Learner will find it a good plan to examine the formation of the noose upon an old String.

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When the string becomes too soft and too long for the Bow, rub it with bees-wax, and then twist it a little in the direction it was originally twisted; which will draw in the fibres and shorten the string.

Bows have generally a small hole through the upper horn, through which a fine silken cord is passed, to tie up the eye of the String, in order to prevent it from running down the Bow when taken out of the bag; as that is liable to break the composition, and damage the string.

When going out to shoot, a spare string or two, ready wrapped and fitted, should always be taken, for fear of accident.

On Arrows.

Arrows are differently shaped: some are made of uniform thickness throughout; some a little protuberant in the middle; some largest close under the feathers, and tapering gradually to the head; others are largest at the head, and taper gradually to the nock.

Those which are largest in the middle stand best in a Bow, and appear to be the most suitable for a long length. But the shape is of less consequence to the correct flight of of an Arrow, than its being made straight, properly feathered, and of a weight well adapted to the power of the Bow.

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The length has been previously mentioned in the observations on the Bow. (page 16.)

Arrows are weighed against silver coin, and the weight is marked accordingly.

The proper weight of an Arrow for a person who uses a Bow drawing a given weight, should be ascertained by *trial*; as the Archer may *loose* his Arrow quickly or slowly; or the Bow may have a quick or a slow cast.

Mr Roberts, in the English Bowman, gives the following scale for the weight of Arrows to suit given distances.

					s.	*d.*		*s.*	*d.*
4	Rods,	or 30	yards,	from	4	0	to	6	0
8	ditto,	or 60	ditto,	from	3	6	to	5	6
12 / 16	ditto,	or 90 / 120	ditto,	from	3	0	to	4	6

But there cannot be any exact rule established, for the obvious reasons that have been just stated. But it will be found, generally, that Arrows from the weight of 3s. 6d. to 5s. 6d. are the most useful under all the varying circumstances. Experience, however, can be the only sure guide to an Archer in the selection of his Arrows.

A learner had better be guided by the judgment of his Bow-maker in this respect.

Unfeathered Arrows will not fly directly to the mark; but will deviate on either side from the straight course in

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which they are discharged, and will sometimes endanger the safety of bystanders.

The feathers, properly disposed on a Shaft, tend to produce that rotatory motion on its axis, which is essential to its correct flight.

Fletchers of modern days find the feathers of the turkey and the goose to be the best adapted for Arrows. There are three feathers inserted; one, which is mostly of a different colour, and is called the *cock-feather*, stands upon the horn, or in a line with it: the other two are so placed as to run over the Bow without rubbing against it. When the three feathers are all of a similar colour, the *cock-feather* may be known by being placed on the horn. In shooting, the *cock-feather* must be placed *uppermost*, or on that side *from* the bow.

When an Arrow has been shot into the mark or the ground, be particularly careful to take hold near the head, and to twist or turn it round as you draw it out; by which means you will extract it more easily, and with much less liability to injury: for without using this caution, you may easily bend it.

It will be necessary that you have a mark painted on your Arrow just below the feathers. Some have their Crest, others a pattern of some ribbon, or other mark according to their own fancy. It is much better for them to be marked, to prevent confusion when several are shooting together: the mark may be from one to two inches broad.

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The Quiver.

Quivers are now generally made of tin. They were formerly made of wood; afterwards of leather, and sometimes of paper: but the tin ones are almost universally preferred. A Quiver should be made capable of containing about a dozen Arrows, with a lid in the inside of the top, forming a small box, to contain a spare String or two, some silk for wrapping, a piece of bees-wax, and a small file, to widen the nocks of the Arrows, if necessary.

The Quiver is not worn in Butt or Target shooting, but it is taken into the field, and placed at a short distance from the standing; that the Archer may have recourse to it, to supply himself with a fresh Arrow or String, &c. in case of accident.

The Arm-Guard.

The *Arm-Guard* or Bracer, is a strong piece of smooth leather which is buckled round the Bow-Arm, to prevent the Stroke of the String from hurting it, or from wearing out the sleeve of the garment. Besides, the striking of the String against a loose sleeve, may divert the course of the Arrow: which will not be the case when it strikes against the smooth surface of the guard.

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The Finger-Stall, or Shooting Glove.

Finger-stalls or Shooting-gloves are to prevent the String from hurting the fingers, in *drawing* and *loosing* the Arrow. The finger-stalls are made the length of the first joints of the fingers, and are fastened to thongs which reach up to the wrist, and are there connected with a strap that buttons round. This may be used with or without a glove.

Some prefer a common leather glove, with bits of strong smooth leather stitched on the fingers to the length of the first joint. The bits of leather must not on any account extend beyond the ends of the fingers, nor past the first joint: as in the former case, the *loose* will not be so quick; and in the latter, the joints of the fingers would be too much confined to draw the Bow with ease.

The Belt, Tassel, and Grease Box.

The Belt is generally about three inches wide, and may be made of leather of different descriptions agreeably to the fancy. It is buckled round the waist, and has the bucket or pouch suspended to it, to hold the Arrows which are for immediate use. The bucket is worn on the right side, as in Figures 1, 2, and 3, Frontispiece.

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The Tassel is used for the purpose of cleansing the Arrow from dirt, when it is drawn out of the ground. As a small portion of dirt would tend to impede the flight of the Arrow, this is to be considered a very necessary Article.

The Grease-box contains some deer's suet, to be used occasionally for anointing the finger-stalls, to make them smooth and pliant: also to rub the arm-guard when the surface has become rough from the action of the string.

Targets.

A Target consists of three parts; the Facing, the Mat, and the Stand.

The Stand may be made of three pieces of wood chamfered to an edge next to the Mat, and fastened together at the top with a small screw-pin. On the two outer ones are fixed hooks to receive the Mat: the middle one serves for a prop.

The Mat is made of the same material, and in the same manner as bee-hives. It is about two inches thick, and a little larger than the outer circle of the Facing. The superfluous canvas may be turned behind and stitched to the Mat.

The Facing is formed of canvass, and divided into five

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concentric circles: namely, *gold, red, inner white, black,* and *outer white.* The part exterior to the outer white is painted of a dark green colour.

The size of the Target varies according to the length of the shooting.

Roberts, in page 244, says that for sixty yards the Target should be two feet, for eighty, three feet, and for a hundred, four feet in diameter. Where the shooting is at three lengths, this proportion is about right: but where only two lengths are used, sixty yards for the Ladies' Shooting, and a hundred for the Gentlemen's, or sixty and a hundred each for two distinct prizes, it will be as well to have the Targets three feet in diameter for sixty, and four feet for the hundred yards.

The more central the circle, the greater is its value. The hits are reckoned as below.

A hit in the gold counts *nine.*
One in the red, ... *seven.*
One in the inner white, *five.*
One in the black,..... *three*
One in the outer white, *one.*

Shots in the green margin, which is called the *petticoat,* or the *sous,* are of no value.

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On Shooting.

Description of the methods, positions, and attitudes of shooting; from the nocking to the loosing of the Arrow.

To nock is to fix the Arrow in its proper place on the String. Some observations on the nocking point have been previously made. (pages 18 and 19.)

Take the Bow in your left hand, with the String towards you, the upper end being towards the right. Hold it in a horizontal position, while you take the Arrow by the middle, pass it on the under side of the String and the upper side of the Bow, till the head reaches two or three inches past the left hand: and there hold it with the thumb or the forefinger while you remove the right hand down to the nock. Turn the Arrow till you find the cock-feather, (as shown in the position of Figure 2, Frontispiece,) then pass it down the Bow, the cock-feather uppermost, and fix it on the nocking point.*

A graceful attitude in drawing the Bow, is the theme

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* If the Arrow be fixed on the String the wrong way, the cock-feather will pass over the Bow, and the Arrow will be thrown to the left of the mark: and in a few shots of this kind, the feather will be taken off.

Avoid taking hold of the Arrow by the feathered part; as it is of great importance to the accurate flight of the Arrow, that the feathers should be kept straight and unruffled.

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of the greatest admiration, and merits, therefore, a particular attention.

The body should be in a square line with the mark, the face only being turned towards it; the feet flat on the ground, the heels being five or six inches apart, the left foot a little turned out towards the mark; the head and chest inclined a little forwards, but not bending the body below the waist.

In taking aim, hold the Bow perpendicular, and take it towards the mark in a circular direction.

Drawing is performed in different ways. The easiest you will find to be, by extending the Bow-arm and drawing at the same time, holding the Bow so that the resistance of drawing may be against the wrist; which will cause you to turn it more *in*, and the String to strike against the proper part of the Arm, where the Guard is placed to protect it.

In taking aim, the Arrow must be drawn to the ear. (as in the position of Figure 3, Frontispiece.) It is the best way to draw regularly throughout, and take aim during the time you are drawing, that you may be ready to *loose* the moment the Arrow is drawn up to the head.

Some draw up the Arrow to its full extent, and then pause to take aim. This should be avoided; as by being held stretched too long, the Bow may be endangered; and the hand will be rendered unsteady.

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Loosing must be quick, and the String must go from the fingers clean and steadily, the Bow-hand at the same time being held as firmly as if fixed in a vice: for it entirely depends on the firmness at the moment of loosing, whether the shot be good or bad.

A fixed attention to the object, with the utmost stability and collectedness both of body and mind, are absolutely necessary at this period: and therefore all talking, and every thing else which may have a tendency to attract or divert the attention, should be studiously avoided.

If in drawing the Bow, the Arrow should fall off the Bow-hand, you may turn the Bow a little obliquely; so that the Bow and your knuckle may form a groove for the Arrow. The reason of its falling off, is the placing of the String too far up the fingers, which causes it to twist in the drawing, and the Arrow is thereby thrown off from resting against the Bow.

This is an error you may soon learn to avoid: if you do not, it will retard your loosing, and thereby impede in some degree the flight of your Arrow. The proper point for drawing, is about mid-way between the ends and the first joints of the fingers. Due attention will soon enable you to remedy the evil.

Three fingers may be used in drawing, but the Arrow must be between the first and second.

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In taking aim, two main points are to be attended to: namely, the *direction* and the *length*. It requires considerable experience to do this well; as it can depend only on your own observations. Your Bow may be a weak or a strong one; the distance small or great; and every variation in these and other circumstances will of course require a corresponding variation in the elevation of your Arrow. If you find it to fly over the mark, you must give it less elevation the next shot; if short, it will require more elevation.

The speed of an Arrow is materially affected by the wind blowing *towards* or *from* the mark; which circumstances will obviously assist or retard its flight.

Fix your eyes on the mark, and not on the Arrow, as some do when they shoot, for fear of setting the shaft within the Bow. Some will have a small knob on the shooting-glove to aim by. Others look at the mark till the Arrow is nearly drawn up; then remove the eye to the Arrow, till the very instant they are going to loose, and then look to the mark again. These are but awkward make-shifts; and will be better avoided in learning to shoot. Fix the sight, then, steadily on the *mark*; taking aim with both eyes open, and not winking one, as is the more usual practice in shooting with fire-arms.

A side wind, or one that blows across the line of the mark, will materially affect the flight of the Arrow. In that case, the wind has more power on the feathered end, than the other end; and if blowing pretty hard, will drive

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it two or three inches more out of the straight line than the other.

If therefore, you shoot the same on a windy day, as on a calm one, and do not make due allowance for the strength and direction of the wind, your Arrow must deviate from the mark. The required allowance must be made at the moment of loosing, and must be regulated only by that nowledgke of the subject which is derived from experience.

Target Shooting.

Shooting at the Target is generally performed at the distance of sixty, eighty, or a hundred yards. A prize may be shot for in three different ways: first, by making the most central shot; secondly, by the number of hits made in the Target, without reference to the distinction of colours; and in the third place, by allowing to each hit its proportionate value, according to the magnitude of the circle in which it is made, and its distance from the centre, the system of which is described in page 26; where it is shown that the gold counts nine times as much as the outer white, because it is the *central* colour, and is only about a *ninth part* of the surface of the other. The last is the fairest way of shooting for a prize; because it is the undoubted criterion of the greatest skill, and gives the best shooter the best chance of winning. The most central shot may happen to be made by a stroke done more at random than another.

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When an Archer has made a shot in the gold, he may write his name immediately over the point, before he withdraws his Arrow.

It is most convenient to have two Targets to shoot at, one at each end; so that the shooters stand in front of one Target, at the distance of half a Bow's length from it, to shoot at the other. This is called a double end.

If the company consist of four or more, they may be divided into pairs: the first pair to shoot their Arrows alternately; then the next pair, and so on.

It is better to shoot only three Arrows at an end; as the hand can seldom retain sufficient steadiness to attempt more successfully.

The nearer you can shoot to *point blank*, the more likely you are to prove successful.

While the first Archer is shooting, the second, standing at a convenient distance on the left, should be nocking his Arrow, in order to save time. The first having shot, should then walk off on the right side, that the second may step into his place without any impediment.

If by accident an Arrow fall off the String, and the Archer can reach it with his Bow, he is allowed to shoot again: but beyond the reach of his Bow, it must be **reckoned a shot.**

In central shooting, if two shots are so nearly alike that the difference cannot be decided, the parties must shoot

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again, and the shot nearest to the centre at the next end wins. In shooting for numbers, two who count alike, must shoot another end to decide it.

To keep an account of the game, a card may be prepared by being divided into squares as in the annexed pattern; the first column containing the names of the Shooters, the the next five columns for marking the number of hits made by each in the respective circles, the seventh column for inserting the total number of hits, the eighth for the value of the hits made in each circle, according to the number which each is entitled to count, and the ninth for the total value.

Names.	Gold counts 9	Red counts 7	Inner White counts 5	Black counts 3	Outer White counts 1	Number of hits	Hits multiplied.	Total value.
A. B.	..	....	....	....	....	51	18 49 50 42 18 ----	177
C. D.	.	....	....	....	....	53	9 56 45 45 20 ----	175
E. F.	..	....	....	....	....	55	18 28 55 51 21 ----	173

The dots in the squares represent the number of hits made in the respective circles. In the field they should be made by piercing the card with a pin,—A card should be kept for this purpose at each Target.

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Butt Shooting.

Butts are built of long sods of turf, pressed close together. The form of the base is an oblong square, being about eight or nine feet on the long or front side, and four feet on the short side. The height is generally about seven feet, and the dimensions diminish gradually from bottom to top, so as to give the Butt a pyramidal form: the upper surface measuring about three feet by one foot and a half: upon which may be placed a top in the form of an urn, a vase, &c. agreeably to the taste or fancy of the Archer.

Mr. Roberts, in describing the Butts erected by the Toxophilite Society, says that they were in sets; each set consisting of four, ranged at the distance of thirty yards from each other; and forming a chain of lengths of 30, 60, 90, and 120 yards: but so disposed as not to stand in the way of the Archer, when shooting at any of the lengths.

In front of the Butt, about three feet high, is placed the mark: which is a circular piece of thin white paste board, fastened by a peg through the middle. The size of the mark for the distance of thirty yards is four inches in diameter; for sixty yards, eight inches, and so on, increasing in proportion to the distance.

Shots out of the mark are accounted nothing; and he who makes the greatest number of hits during the day, wins: but if two are alike, the preference is given to him who has shot nearest the centre.

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Other games in Archery are so little practised, that it is unnecessary to give more than a slight description.

Roving Shooting

Is so called because the Archers have no particular fixed place or mark, but roam from field to field; sometimes traversing a circuit of several miles. The marks are trees, bushes, or any other convenient objects; and he who makes the winning shot at any appointed mark, chooses the next. The distance should be from one hundred and fifty to two hundred yards; and seven is generally considered the game. An Arrow that is not shot within five Bows' length of the mark, has no pretension to score: within that distance a person scores one or two, according as he may have one or two Arrows before his adversary's first.

An Arrow shot into the ground within a foot of the trunk of a tree, counts before one that is shot into the branches; for the trunk, and not the branches, is the object at which the aim is taken.

Arrows with blunt piles are the best for this purpose; and it will be necessary for each person to take ten or a dozen with him, when engaged in a roving match.

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Flight Shooting.

Flight Shooting is merely a trial at shooting the greatest distance. It is dangerous to the Bows, as very long Arrows are used, and the lightest that will stand in the Bow. It is unnecessary to say more than that seven is the game, and that the farthest shot Arrows win.

Clout Shooting.

The Clout is a small white Target of pasteboard, about twelve inches diameter, slipped into a cleft at the end of a short stick; which is stuck into the ground a little obliquely, so as to bring the lower edge of the Clout near to the ground.

This, from its being easily portable, is a convenient mark for carrying out, in order to practise at a considerable distance from home.

The distance is generally from eight to ten score yards; and the same rules may be observed as in Roving.

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